MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS, HAER No. CA-2272-R
MILL CREEK 2 AND 3 SWITCHRACK
Mill Creek
Yucaipa vicinity
San Bernardino County
California

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of Interior
1111 Jackson Street
Oakland, California 94607

HISTORIC AMERICAN ENGINEERING RECORD

MILL CREEK 2 AND 3 HYDROELECTRIC SYSTEMS,
MILL CREEK 2 AND 3 SWITCH RACK

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Location: The Mill Creek 2 and 3 Switch Rack (MC 2 and 3 Switch Rack) is located on the Mill Creek 2 and 3 Powerhouse site, southeast of California State Route 38 (SR 38), immediately west and downhill from the penstocks. The site is located within Mill Creek Canyon in San Bernardino County, California. (USGS topographic map Yucaipa, Section 13; T. 1S., R. 1W.).

Significance: The MC 2 and 3 Switch Rack is a contributing feature to the Mill Creek Hydroelectric Project Historic District. MC 2 and 3 are some of the earliest examples of a high-head hydroelectric system within the United States and are early examples of the first commercial three-phase alternating current stations in California. Three-phase alternating later became the industry standard.

Description: The MC 2 and 3 Switch Rack is located directly to the west of the Powerhouse and north of the Machine Shop. There are transformers attached to the west side of the building. The Switch Rack and transformers are surrounded by chain-link fences and gates with barbed wire bordering the top. Originally, there were four General Electric three-phase 50-cycle air-cooled transformers of 750 kilovolt-ampere capacity, and three single-phase Westinghouse 50 cycle water cooled 335-kilovolt-ampere transformers. The transformers stepped up the generator voltage of 750 volts to a line voltage of 33,000. A new system was installed in the 1990s, with new transformers and breakers, and the rack was reconfigured.

History: The MC 2 and 3 Switch Rack has been updated since it was initially installed following the completion of MC 2 and MC 3. Much of the original switching equipment was replaced circa 1947 and a new switching system was installed in the 1990s. This included the addition of new transformers, and breakers and the rack was reconfigured. The MC 2 system was constructed between 1889 and 1899, and the MC 3 system was constructed between 1899 and 1903. Both systems were originally built by the Redlands Electric Light and Power Company, which was later absorbed by the Edison Electric Company of Los Angeles in 1901. MC 2 has not been in operation since 1992, when it was damaged in a flood and MC 3 is still in operation today. Both systems are currently owned by Southern California Edison. Please see the Historic Context section in the general Historic American Engineering Record for the Mill Creek 2 and 3 Hydroelectric Systems (HAER No. CA-2272) for additional information.

Sources:

Fowler, Frederick Hall. *Hydroelectric Power Systems of California and Their Extensions into Oregon and Nevada, Water-Supply Paper 493*. Washington, D.C.: Government Printing Office, 1923.

White, David R. M. "Cultural Resource Management Plan for the Southern California Edison Company Mill Creek Hydroelectric Project (FERC Project No. 1934) San Bernardino County, California," June 1993.

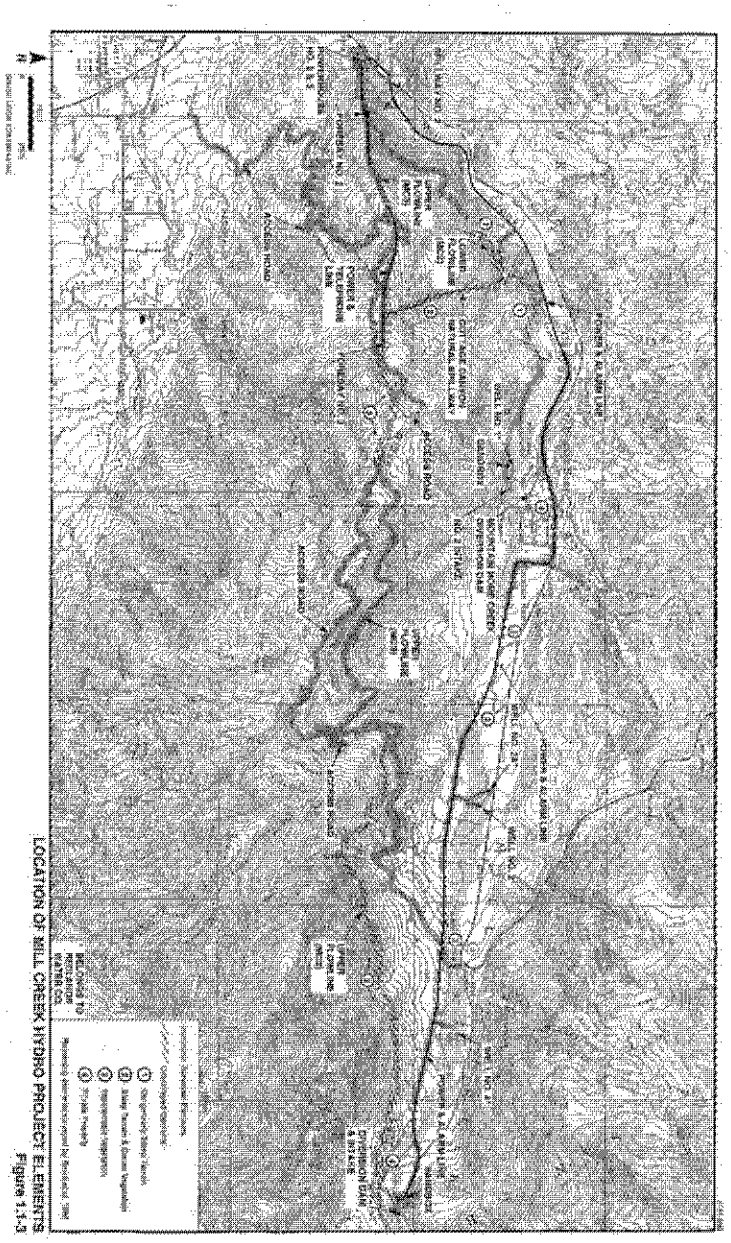
Low, George P. "The Generating, Transmission and Distribution Systems of The Edison Electric Company of Los Angeles, Cal.," *The Journal of Electricity, Power and Gas.* vol. XIII, no. 1. January, 1903.

"Means Much to Redlands: Big Light and Power Deal Closed," *Los Angeles Times.* May 25, 1901, 8.

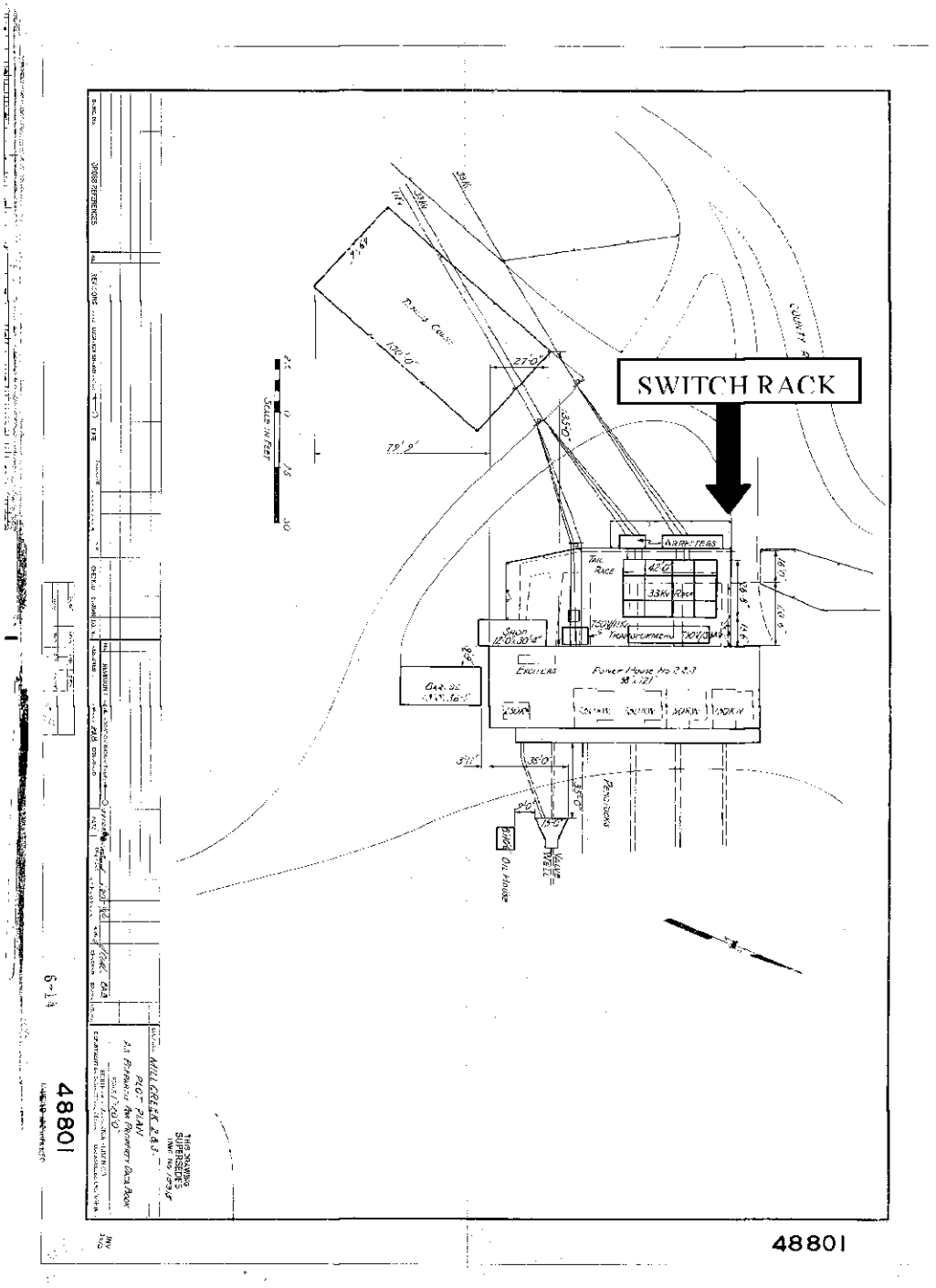
"Redlands Electric Light & Power Co., Edition Electric Co. of Los Angeles, Mill Creek Powerhouses," *National Register of Historic Places Inventory – Nomination Form*, April 30, 1985, item number 7, 10.

Historian: Christeen Taniguchi, Senior Architectural Historian, and Nicole Collum, Architectural Historian II, Galvin Preservation Associates, 1611 S. Pacific Coast Highway, #104, Redondo Beach, CA 90277, 2008-2009.

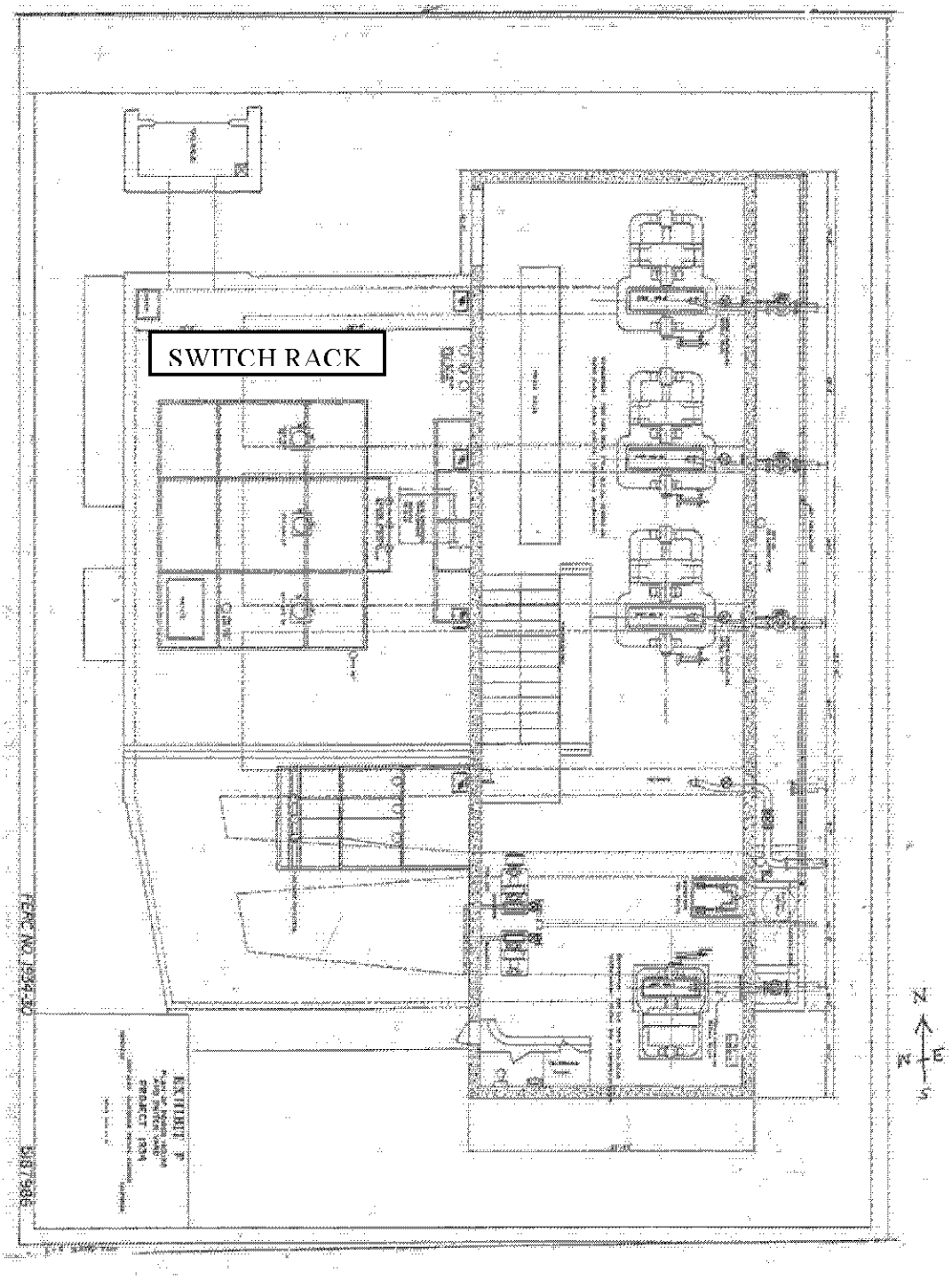
Project Information: MC 2 has not operated since 1992 when it was damaged during floods. It was not, however, decommissioned. The Southern California Edison Company, in conjunction with the San Bernardino National Forest, the agency that owns the property, proposes to formally decommission the facility. This process will include filling the sandbox and forebay with slurry, and removing the metal features. Although MC 3 is still in operation, it is also being recorded as part of this project because of the system's close association with MC 2.



Location of Mill Creek Hydro Project Elements. (Map Courtesy of Southern California Edison)



Plot Plan of Mill Creek 2 and 3 Powerhouse and Switch Rack (Map Courtesy of Southern California Edison)



Plan of Mill Creek 2 and 3 Powerhouse and Switch Rack. (Plan Courtesy of Southern California Edison).